

Miscellaneous.

SIGHTS.—Novelties are scarcely needed at any of the theatres, fresh visitors from the country filling the houses every night. At the *Royal Italian Opera House*, Covent-garden, to keep faith with the subscribers, the new opera "*Saffo*" has been produced, and is splendidly sung. Messrs. Grieva should not have represented two stories under the portico of the Temple of Jupiter: this is a vulgarity of modern date.—At the *Lyceum Theatre* "*King Charming*," for the second season, is drawing crowds every night. The scenery has lost something of its freshness, but is still wonderfully effective.—Mr. Cooper's Diorama of *Ninereh*, in Grosvenor-street, is justly making its way with the public. Although there is less art in it than in some now exhibiting, it is interesting and instructive in the highest degree.—*Vauxhall Gardens* have been singularly successful this year, owing not less to the exertions of the proprietor than the prevalence of fine weather.—The Diorama of the Nile is about to be opened again, with many beautiful additions.

DEPARTMENT OF CIVIL ENGINEERING AND ARCHITECTURE AT QUEEN'S COLLEGE, BIRMINGHAM.—Active steps are at length being taken to carry out an important projected branch of this institution—the department of civil engineering and architecture. A meeting for consultation as to the best mode of organising the scheme was held in the council-room, at Birmingham. Circulars had been addressed to the members of the Institution of Mechanical Engineers, soliciting their attendance to give advice on the subject; and that body was represented by Mr. Slate, of Dudley, Mr. Cowper, late of Smethwick, and Mr. Clift, of Birmingham. The Rev. Chancellor Law, vice-principal of the college, presided; and there were also present, the Rev. H. F. Gray, Mr. Sands Cox, Dr. Birt Davies, and Messrs. Piercy, Taylor, Armfield, Boncher, Newey, and Bateman. The proceedings, as reported in the local papers, were entirely conversational, consisting chiefly of suggestions. The council proposed not only to afford students collegiate residence and tutorial superintendence similar to that existing in the departments of medicine and surgery, but that the lectures should be open for the attendance of clerks and assistants in the offices of engineers, architects, &c. after office hours. These lectures would embrace civil engineering, mechanics, land surveying, practical mathematics, geometrical and architectural drawing, the arts of construction, geology, chemistry, and mineralogy. In addition to professorships for each of these studies, there would be workshops established, and a person appointed to superintend all the manipulatory processes carried on. A committee, consisting of the chairman, Mr. Sands Cox, Professor Shaw, Messrs. Slate, Cowper, Clift, Bateman, and Newey, was appointed, to consider the details. All present expressed their belief that this might, ere long, be one of the first institutions of the kind in the kingdom, especially as the establishment at Putney was broken up.

IMPROVEMENTS IN FURNACES.—Mr. G. F. Muntz, jun., of Birmingham, has patented some improvements in furnaces applicable to the melting of metals for making brass, yellow metal, and other compound metals. Mr. Muntz's invention has for its object the prevention of the loss from volatilisation which occurs when melting and mixing metals (especially when zinc is employed) for the manufacture of brass and other similar compound metals, and consists in the adaptation to the melting furnaces of two additional dampers, one in the bridge of the furnace, to shut off communication between the fire and metal; and the second between the melting-pot and the chimney. There is also an additional flue (provided with a damper), between the fire and the chimney, for carrying off the smoke and products of combustion when the bridge damper is closed. The mixing operation will be thus performed in a close chamber, and the loss from volatilisation much lessened, if not entirely prevented.—*Claim:* The construction

of furnaces for melting and mixing metals, for making brass and other compound metals, in which zinc forms a part, which will allow such metals when melted, and whilst being mixed, to be confined or nearly so from the air, by the furnace being converted into a close or nearly close chamber, thereby preventing a great deal of the loss which occurred from volatilisation in mixing such metals in the furnace in use for this purpose previous to the date of this invention.

HOLLOW BRICKS.—The old-fashioned rectangular brick, remarks the *Spectator*, had a number of disadvantages: its form offered but a poor hold for mortar and secured but an imperfect bond, while its porous texture rendered it liable to become waterlogged and permanently wet and heavy. The application of the drain-pipe die to the formation of bricks removes all these disadvantages, and secures advantages hitherto unobtainable at any but an exorbitant cost. You pour out from the drain-pipe machine an endless stream of tempered clay, shaped to any profile which affords the holding surface best adapted to catch hold of mortar and give a perfect bond: you cut off your bricks at any length or shortness you like; and by making the brick hollow, you at once economise material, get a brick of the utmost lightness consistent with the requisite strength, and are enabled to dispense with such massive foundations as a heavier superstructure would require. The hollow form of the brick enables you also to lay your courses of bricks so as to afford ready-made piping for circulating streams of air and water, hot or cold, throughout the framework of the house.

THE LAW OF PARTNERSHIP.—The report of the committee of the House of Commons on the law of partnership, lately issued, states that the committee have come to the resolution that the law of partnership, as at present existing, viewing its importance in reference to the commercial character and rapid increase of the population and property of the country, requires careful and immediate revision. They recommend the appointment of a commission of adequate legal and commercial knowledge, not only to consider and prepare a consolidation of the existing laws but to suggest such changes in the law as the altered condition of the country may require. Although the committee confine their recommendations to two points, viz., a greater facility in granting charters, under rules published and enforced by the proper authorities, and an easier mode of borrowing additional capital, without risk to the lender beyond the sum advanced, yet they anticipate many improvements in the law bearing on the varied enterprises and improvements of the country from the labours of such a commission as they recommend, and think that a more matured consideration of the important subject will be well purchased by a short delay. There is, therefore, some prospect of the establishment of those limited partnerships, the want of which we have often alluded to and regretted.

GREAT COAL BED IN AMERICA.—A wonderful deposit, it is said, at Straitville, Ohio, exceeds anything of the kind ever discovered. "A gentleman of high standing" is reported to have attested recent borings through the stratum, which was ascertained to be 139 feet thick. About ten miles south, too, there is said to be "a vein of carbonate of iron implanted similar to a slaty structure, with an easy cleavage, and full of well-preserved leaves of the coal formation; some of them on breaking open exhibiting the green of the leaf." The ore, by analysis of Professor Rogers, it is added, contains 44 per cent. of iron.

SHEFFIELD LITERARY AND PHILOSOPHICAL SOCIETY.—A paper was lately read by Mr. Young Mitchell, Master of the Government School of Design, "On the Great Exhibition." The main object of the reader was to call attention to the important question of what shall be done with the income derived from it in the issue? Had the entire object of its more enlightened promoters been attained during the fugitive existence of the display? And was it impossible to give a large, beneficial, and permanent influence to its effects? To both these questions Mr.

Mitchell gave answers decidedly in the negative. To convert the Crystal Palace into some kind of "winter garden," he saw no objection whatever, provided that those who sought the indulgence were to pay for it; but when it was assumed that this metropolitan luxury ought to be provided or maintained out of the proceeds of the exhibition, he demurred at once to the justice and the benefit of such a course on general grounds. Why should the inhabitants of every part of Great Britain and the rest of the world be made to pay for it? Mr. Mitchell suggested the erection of a suitable building—suitable in architectural splendour and internal arrangement—to be used as a place of annual exhibition of progressive improvement, and as a grand national repository for the results of industrial art, and calculated to represent the progress of manufacturing ingenuity, somewhat in the same way that the Royal Academy illustrates the contemporary state of the fine arts. In reference to the eligibility of the Crystal Palace, as a permanent depository of valuable articles, it would occur to any one, the reader thought, that besides the enormous expense of keeping fifteen acres of glass roofing in repair, under the most favourable circumstances, it must be manifest that the risk of instant destruction from mob or elemental violence, to which so fragile an edifice would be exposed, must render it unsuitable for the purpose suggested.

STATUES AND FOUNTAINS—WESTMORELAND LIMESTONE.—A project having been suggested for the erection, in the Infirmary pond at Manchester, of two fountains (more appropriate ornaments than Sir R. Peel's statue), a correspondent of the local *Guardian* advises that they should be constructed of Westmoreland limestone, the pure whiteness of which, he remarks, would contrast finely with the dark bronze of the intended statue. "A self-taught provincial artist, Mr. Duckett, of Preston," he says, "is now at work upon a colossal statue of Sir Robert Peel, from a block of this material, which is pronounced by several competent judges as likely to produce a statue fully equal in appearance and more durable, after years of exposure to atmospheric action with the smoky mixture and other impurities of a large manufacturing town, than the finest Italian marble. This statue will probably be erected in Preston next spring. Those who doubt the enduring qualities of the Westmoreland limestone are referred to Christ Church [the writer must mean St. Thomas's, there being no Christ Church] in that town, which has stood the test of about fifteen years, still retaining the original purity of whiteness. There are inexhaustible quarries of this stone intersected by the canal between Lancaster and Kendal, immense quantities of which have been blasted with gunpowder, and burnt into lime. Blocks of any size might be obtained and conveyed by water to all the southern parts of England, if it were not for a breach of four miles in our inland navigation, between the north and south levels of the Lancaster canal, the completion of which has hitherto been delayed by the expense of an aqueduct over the Ribbles."

BLACKFRIARS BRIDGE.—A correspondent (W. W.) suggests that to prevent the risk of danger to passengers over the sinking arch of Blackfriars-bridge a properly framed gangway, shutting at each end on sound parts of the bridge, should be thrown over the failing part.

SINGULAR OBSTACLES TO THE ERECTION OF A BRIDGE.—Among the curious facts which have turned up in the course of the Mortmain committee's rather discursive investigations, we are told that a ferry across the Tiber, at Ripetta, in Rome, could not be replaced by a suspension bridge, as proposed by Pio Nono, because the penny toll belonged to the souls in purgatory, by legacy of the original proprietor; and the security of a bridge was not held by the trustees to be half so permanent as the natural obstacle of a water privilege, and hence they refused, on behalf of the disembodied spirits, their clients, the chances of increased revenue from the "work pontifical," which might some day be declared toll free.—*Globe*.